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10/018,144	04/11/2002	Byers Laedke	AZ 3012	7044
7590 06/02/2004				
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EXAMINER				
PURVIS, SUE A				
ART UNIT		PAPER NUMBER		
1734				

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/018,144

Applicant(s)

LIEDTKE ET AL.

Examiner

Sue A. Purvis

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 32-40 and 42-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32-40 and 42-62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 51-55 and 62 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 11-126377 (JP '377).

JP '377 discloses an apparatus for bonding two substrates together including a lamination station for applying a first substrate with an adhesive film. The station further includes a pressure roller (51) and the substrate (101) is advanced linearly past the roller (51) during lamination. The substrate adhering station occurs later and includes a pressure pad (208). (See Figures 5 and 14.)

Regarding claims 52, 53, and 62, these claims fail to add any structural limitations to the apparatus claim because they deal with the material worked upon. "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim." *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, "inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims." *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). (See MPEP §2115.)

Regarding claims 54 and 55, the film is aligned to the substrate by means of guide roller (43) and holder (21). (See Figure 5.)

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 32-35, 37, 38, 40, 41, 43, 44, 46, 48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amo (US Patent No. 6,200,402 B1) in view of JP '377.

Amo discloses a method and apparatus for laminating disc-shaped substrates. The process includes providing a first substrate (D1) and pressing an adhesive film (S2, S3) onto the substrate via a pressing roller (1), the pressing roller (1) moves relative to the substrate (D1). Next a second substrate (D2) is aligned relative to the first substrate (D1) and the two substrates are joined. (See Figures 2-7, 16, and 17.)

Amo does not teach moving the substrate during lamination.

JP '377 discloses having the substrate move as a film is pressed thereon.

It would have been obvious to one having ordinary skill in the art at the time the invention was made based on the teachings of JP '377 that an obvious alternative to having the pressure roller move past the substrate is to have the substrate move past the pressure roller, because the two actions are functionally equivalent alternative expedients.

Regarding claim 33, peeler (4) causes the adhesive film to withdraw from the carrier film (S1). (See Figures 8 and 9.)

Regarding claim 34, a protective film (L) is withdrawn from the adhesive film (S2, S3) before it is applied to the substrate (D1). (See Figure 1.)

Regarding claims 35, as can be seen in Figure 20(A), the adhesive film (S2, S3) corresponds to the shape of the substrates.

Regarding claims 37 and 38, the film is applied in a center manner to the substrate by means of a centering shaft (3). The shaft (3) aligns the adhesive prior to the step of pressing the adhesive thereon. (See Figure 3.)

Regarding claim 40, the adhesive film is held above the substrate (D1) prior to the step of pressing the film thereon. (See Figures 10(A) and 10(B).)

Regarding claims 43, 44, and 46, Figure 16 shows a centering and holding device for aligning the substrates where the second substrate (D2) is held apart from the first substrate (D1) before it is pressed thereon.

Regarding claim 48, pressing the substrates together results in an adhesive bond between the two.

Regarding claim 50, a single layer of adhesive film is used.

5. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amo in view of JP '377 as applied to claims 32, 33, and 35 above, and further in view of Deurer et al. (US Patent No. 5,891,290).

Amo discloses the adhesive film with the corresponding size and shape of the substrate but does not disclose how that film was created.

Deurer discloses placing or 'punching' sections (10) cut out from one film (20) onto a carrier film (21).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to place the adhesive film in Amo onto the carrier means by a means similar to that in Deurer, because the embodiment in Deurer is well known

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in the art. Furthermore, it is within the purview of the artisan to look to a reference like Deurer to determine how the film in Amo is created.

6. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amo in view of JP '377 as applied to claim 32 above.

Amo discloses a laminating roller (1) for pressing the adhesive film onto the substrate body, but does not discuss how much pressure is applied in this step or a means for controlling the amount of pressure used.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to control the pressure applied by the laminating roll in Amo, because it is within the purview of the artisan to add a control feature to prevent possible damage that too pressure can cause. Alternatively, if too little pressure is applied, then the film is not applied properly to the substrate and a defective product is created.

7. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amo in view of JP '377 as applied to claim 32 above, and further in view of Nakamura et al. (US Patent No. 6,004,420).

Amo does not disclose if the substrates are pressed together in a vacuum or not.

Nakamura discloses the prior art apparatus in Figure 16 where the two disk substrates (46) are bonded to each other by first bonding the first disk substrate (46) to the adhesive double coated sheet (51) by means of vacuum pressing; then separating a release film (53) by the release film gripping mechanism (49) and inverting the first disk substrate. Then the second disk substrate (46) is bonded, by

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means of vacuum pressing, to the first disk substrate (46) with the adhesive double coated sheet (51) stuck thereto. (Col. 1, lines 31-50.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a vacuum in the bonding step in Amo, because Nakamura shows that it is well known in the art to bond substrates together in a vacuum. Furthermore, an artisan would know that a vacuum condition would prevent contaminants from interfering with the bonding process.

Regarding claim 58, the prior art in Nakamura discloses a vacuum presser (48) with a hood, base, and a support.

8. Claims 47 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amo in view of JP '377.

Amo does not discuss how much pressure is exerted with the two steps are bonded together or a method of controlling the pressure.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to control the pressure applied by the press (100) in Amo, because it is within the purview of the artisan to add a control feature to prevent possible damage that too pressure can cause. Alternatively, if too little pressure is applied, then the two substrates would not be bonded together properly and a defective product is created.

Regarding claim 49, Amo does not state that the adhesive film is 'hardened', however it is within the purview of the artisan to know that the final result desired in Amo is that the adhesive film be hardened, because a permanent bond results between the substrates in Amo and this cannot be achieved if the adhesive film is 'soft'.

9. Claims 56-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '377 as applied to claim 51 above, and further in view of Nakamura et al.

JP '377 does not detail the manner in which the substrates are pressed together. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made based on Figure 14 that the substrates are held apart and then pressed together in a centered manner. JP '377 does not disclose if the substrates are pressed together in a vacuum or not.

Nakamura discloses the prior art apparatus in Figure 16 where the two disk substrates (46) are bonded to each other by first bonding the first disk substrate (46) to the adhesive double coated sheet (51) by means of vacuum pressing; then separating a release film (53) by the release film gripping mechanism (49) and inverting the first disk substrate. Then the second disk substrate (46) is bonded, by means of vacuum pressing, to the first disk substrate (46) with the adhesive double coated sheet (51) stuck thereto. (Col. 1, lines 31-50.)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a vacuum in the bonding step in JP '377, because Nakamura shows that it is well known in the art to bond substrates together in a vacuum. Furthermore, an artisan would know that a vacuum condition would prevent contaminants from interfering with the bonding process.

Regarding claim 58, the prior art in Nakamura discloses a vacuum presser (48) with a hood, base, and a support.

Regarding claim 59, pressure pad (208) in JP '377 is equivalent to a pressure ram.

10. Claims 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '377 in view of Nakamura et al. as applied in claim 59, further in view of Amo.



The pressure pad (208) in JP '377 is not detailed as including a centering and holding device.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have centering and holding device to achieve the proper substrate bonding. This is shown in Figures 16 and 17 of Amo. No actuating device is disclosed in Amo, but it is inherent that an actuating device exists to achieve the movement shown in the Figures.

11. Claims 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP '377 as applied to claim 51 above.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include compressed air in the bonding station to assist in the bonding process, because using compressed air could speed up the bonding process and has less chance of harming the substrates than the pressure the pressure ram would place on it.

#### ***Response to Arguments***

12. Applicant's arguments with respect to claims 32-40 and 42-62 have been considered but are moot in view of the new grounds of rejection.

13. It should be noted by the applicant that with respect to the JP '377 a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

***Conclusion***

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sue A. Purvis whose telephone number is (571) 272-1236. The examiner can normally be reached on Monday through Friday 9am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rick Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sue A. Purvis  
Primary Examiner  
Art Unit 1734

SP  
June 1, 2004